

2011 Carbon Neutral Action Report School District No. 47 (Powell River)



Executive Summary

In 2011 School District 47 made further progress in reducing greenhouse gases. By funding the Sustainable Schools Committee and a half time District Sustainability Co-ordinator, School District 47 is advancing its belief that education is critical to changing behaviour. Part of the vision of the Board of Education is to increase awareness of and positive action regarding climate change. The main focus for the year was reduction in waste. Through Destination Conservation we were able to quantify an overall 13% reduction, saving almost 47 tonnes of carbon dioxide and just under \$11,000 in electricity bills. It was gratifying to see all students and staff get behind our conservation efforts in a significant way. To further encourage our students some of the financial savings have been returned to schools as an incentive to support future projects. Student engagement was ongoing in 2011 as Year 3 of Destination Conservation put emphasis on reducing waste. In the area of computer technology steady progress was made with acquiring improved hardware and virtualizing servers. The Operations Department made some additional progress in reducing greenhouse gas with the replacement of an aged boiler at one of the elementary schools as well as having replaced windows in one wing of another elementary school. Our Sustainable Schools Committee continues to lead the work of educating and inspiring employees. They used their financial resources to provide in-service, assist with supporting Destination Conservation's school based teams and provide grants to Brooks Secondary's Students For Environmental Action (SEA) group. The SEA group is gaining traction, with special initiatives to get staff and students cycling to school and designing a major school garden project.



Steve Hopkins, May 15, 2012
Secretary Treasurer

2011 Greenhouse Gas Emissions

School District 47 has reported 2011 greenhouse gas (GHG) emissions from all sources totalling 1413 tonnes. It was estimated that stationary fugitive emissions from cooling do not compromise more than 0.01% of School District 47's total emissions and an ongoing effort to collect or estimate emissions from this source would be disproportionately onerous. For this reason, emissions from this source have been deemed out-of-scope and have not been included in School District 47's total greenhouse gas emission profile.

Changes in Greenhouse Gas Emissions & Offsets Reporting from 2010-2011

In 2010, School District 47 underpaid our carbon offsets by 2 tonnes. In 2011, we overpaid these offsets by 1 tonne. Therefore, there is an outstanding payment of 2 tonnes currently owing.

Offsets Applied to Become Carbon Neutral in 2011

Total emission offsets in the amount of \$29,575 have been purchased from Pacific Carbon Trust, making School District 47 carbon neutral. As required by section 5 of the Carbon Neutral Government Regulation, 76 tonnes of CO₂e emissions resulting from the operation of school buses were reported as part of our greenhouse gas emissions profile in 2011.

Emissions Reduction Activities

Actions Taken to Reduce Greenhouse Gas Emissions in 2011

District schools made significant progress with their supplies, with 98% of the paper purchased having recycled content! In the area of computer technology, server virtualization continues, with over half a dozen new, more energy-efficient servers virtualized in the past year and plans to virtualize half a dozen more within the next year. Additionally, all retired equipment was recycled; no electronics went to the landfills this past year. High school students continue to be encouraged to bring their own electronic devices (computers, iPads, iPod Touch, iPhones) to school, reducing both purchase and maintenance costs, increasing the quantity and quality of available equipment and giving them the use of the most energy efficient equipment available. The implementation of a fleet maintenance program continued with our buses and maintenance vehicles. Improving sustainability continued to be a target. Our district-wide Sustainable Schools Committee (SSC) significantly expanded their initiatives with additional staff in-service, workshops and guest speakers for students, a Bike to Work/School incentive, garden initiatives at two of our elementary schools, and the addition of critter-proof composts at two more of our schools. School District 47 continued its support of Destination Conservation, with every school having a multi-stakeholder team and Year3 progressing very well. This year, we have made significant progress in reducing the need for paper documents, with many of our common forms now available online. In 2011, our district continued our French Immersion program, called Eco-Immersion due to its focus on outdoor and environmental education. Its continued growth reflects the desire of parents to have even very young children engage learning that has a positive impact on the future of our world.

Plans to Continue Reducing Greenhouse Gas Emissions 2011 – 2013

School District 47 is involved in two building projects that will lead to a reduction in greenhouse gasses. In April 2011 construction began on the new Westview Elementary School, designed to LEED Gold standards, and due to be completed in December 2012. A new field house adjacent to the all-weather playing field at our high school was completed in 2012, and is equipped with environmentally-friendly technologies. A third building project is nearing completion, this project is a wilderness camp for students which will house programs focused on environmental leadership and sustainable living. The building itself was designed using a number of sustainable building principals including solar energy. The inventory of district properties is decreasing, led by the demolition of the former Max Cameron Secondary School in 2011, and looking forward to September 2012, when Oceanview Secondary School will be closed down and its facility will be reconfigured to house alternate and trades programs, eliminating the spaces the district has been leasing. This reduction of square meterage in our building portfolio will reduce greenhouse gases. We will pursue incremental changes such as doing less printing, increasing double sided printing and consistently having lights off and exterior doors closed. Efforts to make more documents and forms available online, with registration forms and bus pass applications made available online early in 2012. Emphasis will be on encouraging parents and staff to use these online forms instead of the previous paper copies. Continued support for Year 4 of Destination Conservation (DC) and the Sustainable Schools Committee is critical to behaviour change. It is proposed that School District 47 continue with its own home grown Destination Conservation programming after the current partnership agreement ends. If it continues, Year 4 of DC is proposed to be energy reduction. Building on the success of significant progress with paper supply purchases, emphasis will be placed on achieving 100% use of paper with recycled content, and increasing usage of recycled paper to 40% recycled content versus 30%.

We invite you to visit the School District 47 Sustainability and Eco-Education website:
www.outdoors.sd47.bc.ca

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Actions Towards Carbon Neutrality

The actions listed below contribute to a reduction in greenhouse gas emissions from sources for which public sector organizations are responsible under the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Mobile Fuel Combustion (Fleet and other mobile equipment)							
Behavior change program							
Provide fleet driver training to reduce fuel use	Ongoing/In Progress	90	% of current drivers are trained	Additional driver in-service was provided.	Continuer driver in-service with the goal of all drivers being trained.	2008	No End Date (Continuous)
Introduce anti-idling policy and/or raise anti-idling awareness for fleet drivers (e.g., signs, stickers, messages)	Ongoing/In Progress			Anti-idling policy discussed during scheduled drivers' meetings.	Continue to remind all drivers of the anti-idling policy on a regular basis.	2008	No End Date (Continuous)
Encourage carpooling in fleet vehicles	Ongoing/In Progress			Computer technicians continued to carpool whenever possible. Tradesmen and laborers carpooled to job sites whenever possible.	Continue to look for opportunities to increase this practice among all staff members	2008	No End Date (Continuous)
Promote alternatives to fleet vehicle travel where possible (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Schools advocated with staff/student/parent population to carpool, walk, or ride bicycles whenever possible.	Continue to promote this practice to all staff and students	2008	No End Date (Continuous)
Stationary Fuel Combustion, Electricity and Fugitive Emissions (Buildings)							
Planning/management							
Reduce office space (square meters) per employee	In Development						
Install a real time metering system (e.g. Pulse, Reliable Controls, Houle Controls)	In Development	20	% of buildings have a real time metering system installed				
Owned buildings							
Establish energy performance baseline for owned buildings	Ongoing/In Progress	50	% of owned buildings have an established energy performance baseline	Due to small district size we are not able to have an energy manager. Baseline data has been collected as personnel resources permit and additional data and information is provided through our participation in Destination Conservation.	Continue to collect data and gather information through Destination Conservation.	2010	No End Date (Continuous)
Achieve LEED NC Gold certification at a minimum for new construction or major renovations	In Development			The design of our new elementary school is targeted at achieving LEED Gold certification. Building is in progress.	The new elementary school building is in progress.	2010	2012
Incorporate integrated design process into new construction or during renovations of owned buildings	Ongoing/In Progress	100	% of buildings built or renovated since start year indicated used the integrated design process	The new elementary school building is in progress.	The new elementary school building is in progress.	2010	2012
Perform energy retrofits on existing, owned buildings	Ongoing/In Progress	90	% of owned buildings have undergone energy retrofits since start year indicated	Lighting Upgrades at Brooks & mechanical upgrade done on Kelly Creek in 2011.	Window upgrades at James Thomson to be completed in 2012	2005	No End Date (Continuous)
Retrofitting owned buildings							
Upgrade mechanical systems (heating, cooling, ventilation) during retrofits	Completed in 2011	100	% of retrofits since start year indicated had heating, cooling, and ventilation systems upgrades	Started a mechanical system upgrades on Kelly Creek Community School.	Finished mechanical system upgrade early in 2012.	2010	2012
Upgrade lighting systems during retrofits	Completed in 2011	100	% of retrofits since start year indicated had lighting systems upgrades	All but two owned buildings received lighting upgrades in 2011.		2010	2012

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Upgrade/adjust control systems during retrofits	Ongoing/In Progress						
Improve building insulation (including windows) during retrofits	In Development						
Install an on-site renewable energy demonstration project	In Development						
IT power management							
Implement server virtualization	Ongoing/In Progress	90	% of servers have been virtualized since start year indicated	The process of virtualizing computers was continued and we virtualized another 50% of our servers.	Complete server virtualization.	2008	2012
Apply auto-sleep settings on computer monitors and CPUs	Ongoing/In Progress	50	% of computers have auto-sleep settings applied	All teacher computer monitors have auto sleep settings.	At this point there are no plans to extend this process to district computers.	2008	2011
Remove stand-alone printers, copiers, and/or fax machines and install multi-function devices	Ongoing/In Progress			Replaced current stand-alone printers, copiers and/or fax machines with multi-function devices as equipment needed replacing	Continue replacing stand-alone items with multi-function devices.	2008	No End Date (Continuous)
Apply auto-sleep settings on printers, copiers, fax machines, and/or multi-function devices	Ongoing/In Progress					2008	No End Date (Continuous)
Replace computers with ENERGY STAR models during regular computer upgrades	Ongoing/In Progress						
Appliances and electronic devices							
Replace refrigerators with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress	75	% of fridges are ENERGY STAR rated	No refrigerators were replaced.	Continue to replace current refrigerators with Energy Star models as equipment is replaced.	2008	2013
Replace other appliances or electronic devices with ENERGY STAR models or source ENERGY STAR models for future purchases	Ongoing/In Progress			Older appliances and electronic devices have been replaced with Energy Star models as needed.	On an as needed basis, continue to replace older appliances and electrical devices with Energy Star models.	2008	No End Date (Continuous)
Replace desk lamp incandescent bulbs with compact fluorescent (CFL) bulbs or source more efficient desk lamps for future purchases	Ongoing/In Progress			Replaced old bulbs with CFL bulbs wherever possible.	Continue to replace all bulbs with CFL bulbs and replace older lamps with more efficient ones, as needed	2008	No End Date (Continuous)
Behavior change program							
Ask staff to unplug electrical equipment or switch off power bars when not in use	Ongoing/In Progress			Staff reminded to unplug electrical equipment.	Continue to remind staff to unplug electrical equipment.	2009	No End Date (Continuous)
Ask staff to close blinds at end of work day to reduce heating/cooling demands	Ongoing/In Progress			Staff reminded to close blinds at end of work day.	Continue to remind staff to close blinds at end of work day.	2009	No End Date (Continuous)
Encourage staff to use air dry setting on dishwashers	Ongoing/In Progress						
Provide tips to staff on saving energy in the office while working outside of regular business hours	Ongoing/In Progress						
Encourage use of stairs instead of elevators	Ongoing/In Progress			Elevators reserved for use only by physically disabled persons.	Elevators remain reserved for use only by physically disabled persons.	2007	No End Date (Continuous)
Provide reminders for turning off lights (e.g., signs, stickers, messages)	Ongoing/In Progress			Destination Conservation teams continued to remind staff and students.		2008	2013
Promote hot water conservation	Ongoing/In Progress			Destination Conservation teams initiated school level water conservation initiatives.		2009	No End Date (Continuous)
Supplies (Paper)							
Paper Type							

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Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)		Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Purchase 30% post-consumer recycled paper	Ongoing/In Progress	54	% of total paper purchased contains 30% recycled content	Continued to encourage all schools and the board office to achieve the goal of using only paper with recycled content.	Would like to see all schools and the board office using only paper with recycled content.	2009	2013
Purchase 40% post-consumer recycled paper	Ongoing/In Progress	41	% of total paper purchased contains 40% recycled content	Saw schools greatly increase purchase of paper with 40% recycled content.	Continue to encourage schools to increase the purchase of paper with 40% recycled content.	2010	2013
Purchase 100% post-consumer recycled paper	Ongoing/In Progress	3	% of total paper purchased contains 100% recycled content	Schools increased the purchase of paper with 100% recycled content.	Continue to encourage schools to increase the purchase of paper with 100% recycled content.	2010	2013
Printer/document settings							
Switch networked printers and photocopiers to automatic double-sided	Ongoing/In Progress	60	% of network printers or photocopiers are set to automatic double-sided	As printers need replacing we will continue to install duplex printers.	Continue to buy duplexing printers to replace existing equipment.	2009	No End Date (Continuous)
Apply "print and hold" settings to networked printers to eliminate unclaimed print jobs	Ongoing/In Progress						
Reduce default margin size in standard document templates (e.g., letters, briefing notes, forms, etc.)	In Development						
Electronic media in place of paper							
Use electronic document library for filing common documents	Ongoing/In Progress						
Post materials online that were previously printed	Ongoing/In Progress			Many common district forms and documents now available online, including registration and newsletters. Some forms can be submitted electronically.	Continue to review district printed materials and post them online if appropriate and continue to encourage parents to sign up for e-newsletters.	2009	No End Date (Continuous)
Behavior change program							
Train staff to use collaborative software for electronic editing (e.g. SharePoint, Groove, etc.)	Ongoing/In Progress	70	% of staff currently have received collaborative software training	Additional teachers interested in Sharepoint were trained.	Train more teachers in the use of SharePoint software.	2009	No End Date (Continuous)
Encourage staff to hold paperless meetings or presentations (i.e., no handouts)	Ongoing/In Progress			Promoted this behavior at all district- and school-based meetings	Continue to encourage staff	2009	No End Date (Continuous)
Encourage re-use of scrap paper	Ongoing/In Progress			Used staff meetings to promote this behavior, and encouraged teachers to promote this behavior with their students.	Continue to encourage staff	2009	No End Date (Continuous)

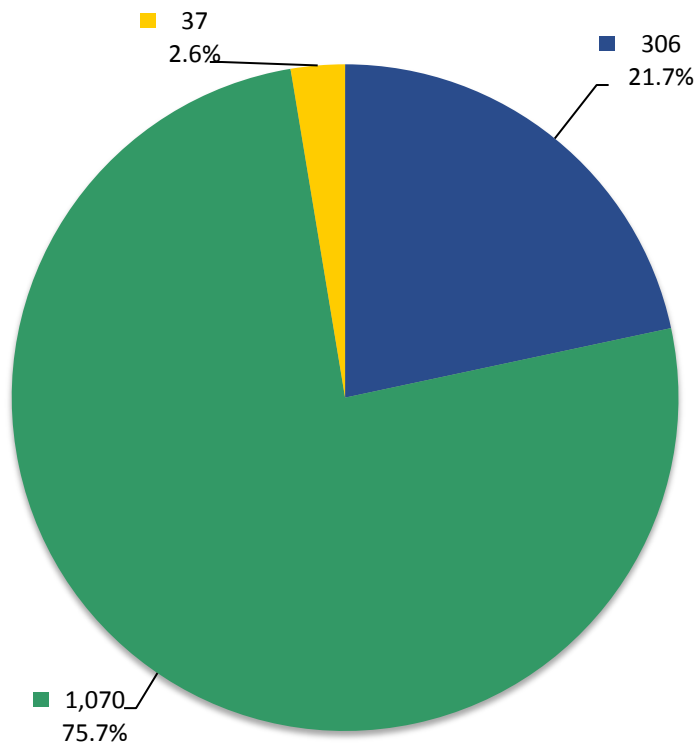
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Actions to Reduce Provincial Emissions and Improve Sustainability

The actions listed below contribute to a reduction in greenhouse gas emissions from sources that fall outside of the reporting requirements defined in the carbon neutral government regulation of the *Greenhouse Gas Reduction Targets Act*. Public sector organizations can optionally use this section to report on actions that will help British Columbia meet its provincial greenhouse gas reduction targets, engage the public, and improve environmental sustainability across all aspects of their organization.

Action	Status (as of 12/31/11)	Performance to Date (as of 12/31/11)	Steps Taken in 2011	Steps Planned for 2012 -2014	Start Year	End Year
Business Travel						
Behavior change program						
Encourage carpooling to meetings	Ongoing/In Progress			Continue to encourage staff		
Encourage alternative travel to meetings (e.g., bicycles, public transit, walking)	Ongoing/In Progress			Continue to encourage staff		
Education, Awareness, and Engagement						
Staff Professional Development						
Support green professional development (e.g., workshops, conferences, training)	Ongoing/In Progress					
Staff awareness/education						
Provide green tips on staff website or in newsletters	Ongoing/In Progress					
Client/public awareness/education						
Provide green tips on client/public website or in newsletters	Ongoing/In Progress					
Other Sustainability Actions						
Commuting to and from home						
Encourage commuting by foot, bicycle, carpool or public transit	Ongoing/In Progress					

**School District 47 - Powell River
Greenhouse Gas Emissions by Source
for the 2011 Calendar Year (tCO₂e*)**



Total Emissions: 1,413

- Mobile Fuel Combustion (Fleet and other mobile equipment)
- Stationary Fuel Combustion (Building Heating and Generators) and Electricity
- Supplies (Paper)

Offsets Applied to Become Carbon Neutral in 2011 (Generated May 18, 2012 12:14 PM)

Total offsets required: **1,182**. Total offset investment: **\$29,550**. Emissions which do not require offsets: **231** **

*Tonnes of carbon dioxide equivalent (tCO₂e) is a standard unit of measure in which all types of greenhouse gases are expressed based on their global warming potential relative to carbon dioxide.

** Under the *Carbon Neutral Government Regulation of the Greenhouse Gas Reduction Targets Act*, all emissions from the sources listed above must be reported. As outlined in the regulation, some emissions do not require offsets.